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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,884	02/01/2006	Manfred Kreuzer	4916/PCT	9515

  

21553	7590	08/06/2007
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EXAMINER	
DEB, ANJAN K	

  

ART UNIT	PAPER NUMBER
2858	

  

MAIL DATE	DELIVERY MODE
08/06/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/566,884

Applicant(s)

KREUZER, MANFRED

Examiner

Anjan K. Deb

Art Unit

2858

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities: The specification does not conform to the preferred layout for the specification of a utility application (see guidelines below).

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Appropriate correction is required.

*Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arai (US 2004/0123678 A1) in view of Kim et al. (US 5,982,835).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Re claim 1, Arai (US 2004/0123678 A1) disclosed torque measuring device comprising torque detector 21 including strain gauges arranged in a Wheatstone bridge configuration (paragraph 0034) coupled to rotor (rotary section 11) having output coupled to amplifier 22 and voltage frequency converter 24 and a transmitter circuit 27 for transmitting to a stator 30 (Fig. 6)(paragraph 0033).

Arai did not expressly disclose synchronization circuit (PLL) for jitter suppression.

Art Unit: 2858

Kim et al. (US 5,982,835) disclosed synchronization circuit (PLL)(phase lock loop) is circuit-connected for jitter suppression in a signal.

At the time the invention was made it would have been obvious for one of ordinary skill in the art to modify Arai by adding synchronization circuit (phase lock loop) coupled to an input signal as disclosed by Kim et al. for signal jitter suppression.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arai (US 2004/0123678 A1) and Kim (US 5,982,835) in view of Keller (US 3,588,676).

Re claim 2, Arai and Kim disclosed all of the claimed limitations as set forth above including frequency divider 25 circuit which divides down the output frequency except quartz controlled frequency.

Keller disclosed measuring system (nuclear resonance spectrograph) (Fig. 4) comprising quartz controlled frequency 1 (quartz oscillator) that provides a highly stable frequency.

At the time the invention was made it would have been obvious for one of ordinary skill in the art to modify Arai and Kim by including quartz controlled frequency, which provides a stable frequency for driving a voltage frequency converter.

***Allowable Subject Matter***

5. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The primary reason for the allowance of claim 3 is the inclusion of “quartz frequency is produced on the stator side and is inductively transmitted in a synchronized manner to the rotor side with the aid of the transmitter circuit and is supplied to the synchronous voltage-frequency converter.”

### *Conclusion*

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Suzuki et al. (US 2005/0257626 A1) disclosed torque-measuring device for rotating body comprising inductively coupled 116,117 rotor and stator oscillator frequency (Fig. 4).

Bill et al. (US 5,837,909) disclosed (Fig. 3) rotor (shaft) torque measurement system comprising strain measuring bridge 23 coupled to rotor for measuring torque (shaft torsion) and transmitter 27 circuit coupled to bridge for transmitting to a stator (non-rotating part).

Geilenbrugge (US 2003/0196497 A1) disclosed torque-measuring device of rotating machine comprising strain-measuring bridge 11 arranged on the rotor, the output signals of strain measuring bridge 11 are amplified 51.

Lanham (US 7,047,817 B2) disclosed torque measurement device comprising strain bridge 351, amplifier 353 coupled to voltage frequency converter 355 and transmitter 357 (Fig. 11).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Anjan K. Deb whose telephone number is 571-272-2228. If

Art Unit: 2858

attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,  
Andrew H. Hirshfeld can be reached at (571) 272-2168.



**Anjan K. Deb, P.E, Ph.D.**

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Primary Patent Examiner

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Art Unit: 2858

8/2/07